



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2013-0468; Directorate Identifier 2012-NM-147-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to supersede an existing airworthiness directive (AD) that applies to certain The Boeing Company Model 777-200 and -300 series airplanes equipped with Rolls-Royce engines. The existing AD currently requires repetitive inspections to detect cracks of the outer V-blades of the thrust reverser, and corrective action if necessary. The existing AD also provides for optional terminating action for the repetitive inspections. Since we issued that AD, we have received reports of cracked outer V-blade fittings at the hinge beam end of Rolls-Royce engine thrust reversers, on airplanes on which the optional terminating action was done. This proposed AD would add, for airplanes on which the optional terminating action is done, repetitive inspections for cracking in the outer V-blade fittings of the hinge beam and latch beam ends of each thrust reverser half, and replacement of an affected thrust reverser half if necessary. This proposed AD would also add airplanes to the applicability. We are proposing this AD to prevent separation of a thrust reverser from the airplane during normal reverse thrust or during a refused takeoff, which could result in unexpected thrust asymmetry and a possible runway excursion.

**DATES:** We must receive comments on this proposed AD by **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Melanie Violette, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6422; fax: 425-917-6590; email: [melanie.violette@faa.gov](mailto:melanie.violette@faa.gov).

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2013-0468; Directorate Identifier 2012-NM-147-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

**Discussion**

On December 14, 2006, we issued AD 2006-26-06, Amendment 39-14864 (71 FR 77586, December 27, 2006), for certain The Boeing Company Model 777-200 and -300 series airplanes, equipped with Rolls-Royce engines, as identified in Boeing Special Attention Service Bulletin 777-78-0064, Revision 1, dated November 30, 2006. That AD requires repetitive inspections to detect cracks of the outer V-blades of the thrust reverser, and corrective action if necessary. The existing AD also provides for optional terminating action for the repetitive inspections. That AD resulted from reports of cracked outer V-blades in the thrust reversers. We issued that AD to prevent separation of a thrust

reverser from the airplane during normal reverse thrust or during a refused takeoff, which could result in impact damage to other airplane areas. If a thrust reverser separates from the airplane during a refused takeoff, the engine could produce forward thrust, resulting in unexpected thrust asymmetry and a possible runway excursion.

**Actions Since Existing AD 2006-26-06, Amendment 39-14864 (71 FR 77586, December 27, 2006) Was Issued**

Since we issued AD 2006-26-06, Amendment 39-14864 (71 FR 77586, December 27, 2006), we have received reports of cracked outer V-blade fittings at the hinge beam end of the thrust reverser due to relative movement between the engine and the thrust reverser during flight operation, on airplanes on which the optional terminating action (Boeing Special Attention Service Bulletin 777-78-0061, dated July 6, 2006) specified in AD 2006-26-06 had been done.

**Relevant Service Information**

We reviewed Boeing Special Attention Service Bulletins 777-78-0061, Revision 1, dated August 28, 2007, and 777-78-0064, Revision 2, dated June 14, 2012. For information on the procedures and compliance times, see this service information at <http://www.regulations.gov> by searching for Docket No. FAA-2013-0468.

**FAA's Determination**

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

**Proposed AD Requirements**

This proposed AD would retain certain requirements of AD 2006-26-06, Amendment 39-14864 (71 FR 77586, December 27, 2006). This proposed AD would add new airplanes to the applicability. This proposed AD would also require, for airplanes on which the optional terminating action is done, repetitive inspections for cracking in the

outer V-blade fittings of the hinge beam and latch beam ends of each thrust reverser half, and replacement of an affected thrust reverser half if necessary.

The phrase “related investigative actions” might be used in this proposed AD. “Related investigative actions” are follow-on actions that: (1) are related to the primary actions, and (2) are actions that further investigate the nature of any condition found. Related investigative actions in an AD could include, for example, inspections.

In addition, the phrase, “corrective actions” might be used in this proposed AD. “Corrective actions” are actions that correct or address any condition found. Corrective actions in an AD could include, for example, repairs.

#### **Change to Existing AD**

This proposed AD would retain certain requirements of AD 2006-26-06, Amendment 39-14864 (71 FR 77586, December 27, 2006). Since AD 2006-26-06 was issued, the AD format has been revised, and certain paragraphs have been rearranged. As a result, the corresponding paragraph identifiers have changed in this proposed AD, as listed in the following table:

| <b>Revised paragraph identifiers</b>   |  |
|--|--|
| <b>Requirement in<br/>AD 2006-26-06,<br/>Amendment 39-14864<br/>(71 FR 77586,<br/>December 27, 2006)</b> | <b>Corresponding requirement<br/>in this proposed AD</b> |
| paragraph (f)  | paragraph (g)  |
| paragraph (g)  | paragraph (h)  |

We have removed the reference to paragraph (h) of AD 2006-26-06, Amendment 39-14864 (71 FR 77586, December 27, 2006) from paragraph (f) of AD 2006-26-06 (paragraph (g) of this proposed AD). Paragraph (h) of AD 2006-26-06 requires reporting and is not a method of compliance for doing applicable corrective actions as specified in paragraph (f) of AD 2006-26-06. We have added a reference to paragraph (m) of this AD.

### **Interim Action**

We consider this proposed AD interim action. The manufacturer is currently developing a modification that will address the unsafe condition identified in this AD. Once this modification is developed, approved, and available, we might consider additional rulemaking.

### **Costs of Compliance**

We estimate that this proposed AD affects 55 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

#### **Estimated costs**

| <b>Action</b>   | <b>Labor cost</b>  | <b>Cost per product</b>      | <b>Cost on U.S. operators</b>  |
|---|--|------------------------------|--------------------------------|
| Inspections [retained actions from existing AD 2006-26-06, Amendment 39-14864 (71 FR 77586, December 27, 2006)] | 16 work-hours X \$85 per hour = \$1,360 per inspection cycle | \$1,360 per inspection cycle | \$74,800 per inspection cycle  |
| Repetitive inspections outer V-blade [new proposed action]  | 82 work-hours X \$85 per hour = \$6,970 per inspection cycle | \$6,970 per inspection cycle | \$383,350 per inspection cycle |

We have received no definitive data that would enable us to provide a cost estimate for the on-condition actions specified in this proposed AD.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We have determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

## **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by removing airworthiness directive (AD) 2006-26-06, Amendment 39-14864 (71 FR 77586, December 27, 2006), and adding the following new AD:

**The Boeing Company:** Docket No. FAA-2013-0468; Directorate Identifier 2012-NM-147-AD.

#### **(a) Comments Due Date**

The FAA must receive comments on this AD action by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD supersedes AD 2006-26-06, Amendment 39-14864 (71 FR 77586, December 27, 2006).

#### **(c) Applicability**

This AD applies to The Boeing Company Model 777-200 and -300 series airplanes, certificated in any category, equipped with Rolls-Royce engines, as identified in Boeing Special Attention Service Bulletin 777-78-0064, Revision 2, dated June 14, 2012.

#### **(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 78, Engine exhaust.

#### **(e) Unsafe Condition**

This AD was prompted by reports of cracked outer V-blade fittings at the hinge beam end of Rolls-Royce engine thrust reversers. We are issuing this AD to prevent



separation of a thrust reverser from the airplane during normal reverse thrust or during a refused takeoff, which could result in unexpected thrust asymmetry and a possible runway excursion.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Retained Repetitive Inspections**

This paragraph restates the requirements of paragraph (f) of AD 2006-26-06, Amendment 39-14864 (71 FR 77586, December 27, 2006), with new service information. For Group 1, Configuration 1, airplanes as identified in Boeing Special Attention Service Bulletin 777-78-0064, Revision 2, dated June 14, 2012: Do the detailed inspections to detect cracks in the outer V-blade of the thrust reversers. Do the inspections in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-78-0064, Revision 1, dated November 30, 2006; or Revision 2, dated June 14, 2012. Do the inspections at the applicable times specified in paragraph 1.E., “Compliance” of Boeing Special Attention Service Bulletin 777-78-0064, Revision 1, dated November 30, 2006; except where Boeing Special Attention Service Bulletin 777-78-0064, Revision 1, dated November 30, 2006, specifies an initial compliance time after the date on the service bulletin, this AD requires compliance within the specified time after January 11, 2007 (the effective date of AD 2006-26-06). Do applicable corrective actions before further flight, in accordance with Boeing Special Attention Service Bulletin 777-78-0064, Revision 1, dated November 30, 2006; or Revision 2, dated June 14, 2012; or paragraph (m) of this AD. As of the effective date of this AD, use only Boeing Special Attention Service Bulletin 777-78-0064, Revision 2, dated June 14, 2012, to accomplish the actions required by this paragraph.

**(h) Retained Credit for Previous Actions**

This paragraph restates the credit for previous actions specified in paragraph (g) of AD 2006-26-06, Amendment 39-14864 (71 FR 77586, December 27, 2006). For Group 1, Configuration 1, airplanes as identified in Boeing Special Attention Service Bulletin 777-78-0064, Revision 2, dated June 14, 2012: Actions done before January 11, 2007 (the effective date of AD 2006-26-06), in accordance with Boeing Special Attention Service Bulletin 777-78-0064, dated August 7, 2006, are acceptable for compliance with the requirements of paragraph (g) of this AD.

**(i) Retained Optional Terminating Action for Paragraph (g) of this AD with New Requirements**

This paragraph restates the optional terminating action specified in paragraph (i) of AD 2006-26-06, Amendment 39-14864 (71 FR 77586, December 27, 2006), with new service information. Accomplishment of the actions specified in paragraph (i)(1) or (i)(2) of this AD terminates the requirements of paragraph (g) of this AD. For airplanes on which this terminating action has been accomplished, operators must do the inspection required by paragraph (j) of this AD.

(1) Accomplishment of the applicable inspections and related investigative/corrective actions before the effective date of this AD, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-78-0061, dated July 6, 2006; except, where Boeing Special Attention Service Bulletin 777-78-0061, dated July 6, 2006, specifies to contact the manufacturer for appropriate action, repair before further flight using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

(2) Accomplishment of the applicable modification, inspections, and related investigative/corrective actions, in accordance with Boeing Special Attention Service Bulletin 777-78-0061, Revision 1, dated August 28, 2007; except, where Boeing Special Attention Service Bulletin 777-78-0061, Revision 1, dated August 28, 2007, specifies to

contact the manufacturer for appropriate action, repair before further flight using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

**(j) New Repetitive Inspections**

For Group 1, Configuration 2, airplanes, and Groups 2 and 3 airplanes, as identified in Boeing Special Attention Service Bulletin 777-78-0064, Revision 2, dated June 14, 2012: At the applicable times specified in paragraph 1.E., “Compliance” of Boeing Special Attention Service Bulletin 777-78-0064, Revision 2, dated June 14, 2012, except as provided by paragraph (k) of this AD, do a detailed inspection for cracking of the outer V-blade fittings at the latch beam end and hinge beam end of each thrust reverser half, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-78-0064, Revision 2, dated June 14, 2012.

(1) If no cracking is found, repeat the inspections thereafter at the times specified in paragraph 1.E., “Compliance” of Boeing Special Attention Service Bulletin 777-78-0064, Revision 2, dated June 14, 2012.

(2) If any cracking is found, before further flight, replace the affected thrust reverser half with a serviceable thrust reverser half, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-78-0064, Revision 2, dated June 14, 2012. Repeat the inspections thereafter at the times specified in paragraph 1.E., “Compliance” of Boeing Special Attention Service Bulletin 777-78-0064, Revision 2, dated June 14, 2012.

**(k) Service Information Exception**

Where Boeing Special Attention Service Bulletin 777-78-0064, Revision 2, dated June 14, 2012, specifies an initial compliance time “after the date of Revision 2 of this service bulletin,” this AD requires compliance within the specified time after the effective date of this AD.

## **(l) Reporting**

Although Boeing Special Attention Service Bulletin 777-78-0064, Revision 2, dated June 14, 2012, specifies to submit certain information to the manufacturer, this AD does not include that requirement.

## **(m) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be emailed to:

[9-ANM-Seattle-ACO-AMOC-Requests@faa.gov](mailto:9-ANM-Seattle-ACO-AMOC-Requests@faa.gov).

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane and the approval must specifically refer to this AD.

(4) AMOCs approved previously in accordance with AD 2006-26-06, Amendment 39-14864 (71 FR 77586, December 27, 2006), are not approved as AMOCs for this AD.

**(n) Related Information**

(1) For more information about this AD, contact Melanie Violette, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6422; fax: 425-917-6590; email: [melanie.violette@faa.gov](mailto:melanie.violette@faa.gov).

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW, Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on June 14, 2013.

Jeffrey E. Duven,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

[FR Doc. 2013-15955 Filed 07/02/2013 at 8:45 am; Publication Date: 07/03/2013]